IN THE SPECIFICATION:

Page 10, paragraph 7, delete in its entirety, and replace with the following:

A1

The final product takes the form shown in portion D of figure 4. The ribbon 4 is buried in an n-doped layer confinement or burying 19. It is separated from the p-doped layer 16 by a thin n-doped layer 17 so at no time has there been any migration of p dopant, for example Zn, toward the layer 4 forming the ribbon.

Page 11, paragraph 3, delete in its entirety, and replace with the following:

A2

g1) Lateral etching of the n-doped confinement or burying layer 19, preferably symmetrically relative to the mesa 11, removes the portions on either side of the mesa 11 but not adjacent the mesa 11. After this etching of the layer 19 burying the mesa 11, the mesa 11 is still surrounded by its burying (confinement) layer 19, but the width of that layer has been reduced, for example to approximately four times the width of the ribbon 4. To fix an order of magnitude, if the ribbon 4 has a width of approximately 1.5 μm, the remainder of the layer 19 can have a width of approximately 6 μm.

IN THE CLAIMS:

1. (Currently Amended) A method of fabricating a buried ribbon semiconductor laser structure, said method including the successive steps of:

(b) forming a p-doped confinement layer on top of a III-V material substrate,

(c) then forming a thin n-doped layer on top of said confinement layer,

(d) then forming ~~an~~ a laser active layer on top of said thin n-doped layer,

(f) locally etching said active layer, said thin n-doped layer and a portion of the thickness of said p-doped confinement layer to form a mesa including ~~said~~ a ribbon of said active layer, and

(g) burying said ribbon in an n-doped burying layer so that ~~the~~ all lateral faces of said ribbon are ~~all~~-adjacent only an n-doped layer, said lateral faces including a top face, a bottom face and two side faces joined to the top and bottom faces.

A3

2. (Currently Amended) The method claimed in claim 1 applied to a p-doped III-V material wafer, which method further includes, after step (g) of burying said ribbon in said burying layer, the successive steps of:

(g1) etching to reduce the width of said burying layer, to remove portions on either side of said mesa but not adjacent said mesa so that after such etching said ribbon is still buried in said burying layer, the etched burying layer having a reduced width, a top surface and surfaces substantially perpendicular to the plane of the top or bottom faces of said ribbon, and

(g2) masking said top surface of said burying layer of reduced width and depositing a dielectric material insulative layer so that said insulative layer covers lateral surfaces of said burying layer and portions of said p-doped confinement layer on either side of said mesa.

3. (Currently Amended) The method claimed in claim 1, further including the following step after step d) of forming said laser active layer:

(e) forming a thin non-doped layer on said laser active layer to protect said laser active layer.

4. (Currently Amended) The method claimed in claim 1, further including the following step after step g) of burying said ribbon~~growing said confinement layer~~:

(h) depositing a metallization layer on top of said ~~confinement~~ burying layer.

5. (Currently Amended) The method claimed in claim 2, further including the following step after said step (g2) of depositing a dielectric material insulating layer:

(h') depositing a metallization layer on top of said etched ~~confinement~~ burying layer.

6. (Currently Amended) A method of fabricating a semiconductor laser structure as claimed in claim 4, further including:

- the following step (a) before the step (b) of depositing said confinement layer on top of said III-V material substrate:

A3, cont'd

(a) epitaxially growing a p-doped contact layer on said substrate, and

- the following steps (k) and (l) after said step (h) of depositing said metallization layer:

(k) overturning said wafer onto a second wafer and eliminating said substrate, and

(l) depositing a metallization layer on top of said contact layer.

7. (Currently Amended) A method according to claim 6 of fabricating a semiconductor laser structure, further including a step of implanting protons in ~~lateral outside~~ portions of the p-doped layers.

8. (Currently Amended) A buried ribbon laser including a longitudinally extending laser-active ribbon forming part of a buried mesa, said ribbon having a transverse width and four longitudinally extending lateral faces (i.e. a top face, a bottom face, and two faces joined to the top and bottom faces, wherein said lateral bottom and top faces of said ribbon are adjacent only an n-doped layer, and wherein said lateral faces joining said top and bottom faces are also adjacent only an n-doped layer.

~~9~~. (Canceled)

10. (Original) The buried ribbon laser claimed in claim 8 wherein an n-doped layer less than 1 μm thick separates said ribbon from a p-doped layer.

A4

11. (Currently Amended) The buried ribbon laser claimed in claim 8, including portions, perpendicular to the planes of said top and bottom faces of said ribbon, of a dielectric material layer on either side of said mesa incorporating said ribbon.

12. (Original) The buried ribbon laser claimed in claim 11 wherein the dielectric material layer portions on either side of said mesa incorporating said ribbon are separated from each other by a distance substantially equal to four times the width of said ribbon.

Please add the following new claim:

A5

13. (New) The method claimed in claim 1, wherein said thin layer is less than 1 μm thick.

IN THE DRAWING:

See the concurrently filed Proposed Drawing Correction in which it is proposed to label Figs. 1 and 2 as --Prior Art--, and to amend Figs. 1, 2, 4 and 5 to contain word labels as required by the Examiner.